

Message

From: BOHABOY Spencer [Spencer.BOHABOY@state.or.us]
Sent: 2/13/2019 4:35:38 PM
To: Burgess, Karen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9085a27e8d724564890f33d47c72d9d1-Burgess, Karen]; BOHABOY Spencer [Spencer.BOHABOY@state.or.us]
CC: STURDEVANT Debra [Debra.STURDEVANT@state.or.us]
Subject: RE: LCA language

Thank you Karen,

I was talking with Deb yesterday and passing along your thoughts. We'll be working on the question this week and hopefully be back to you either with some refinements or a meeting request.

I would like to clarify that the department is looking to develop a performance limit that will quantify the level currently attainable rather than a specifically prevent non-compliance. I apologize if I created confusion on this point.

Thanks,

Spencer

From: Burgess, Karen <Burgess.Karen@epa.gov>
Sent: Tuesday, February 12, 2019 5:58 PM
To: BOHABOY Spencer <Spencer.BOHABOY@state.or.us>
Cc: STURDEVANT Debra <Debra.STURDEVANT@state.or.us>
Subject: RE: LCA language

Spencer, My apologies for the delay following up from our conversation last week. I've added yellow highlighted cells to your workbook that relate to my comments about limits representative of the data set, see the attachment. Based on my previous suggestion, you decided to use the individual data points assuming a lognormal distribution to derive max. daily and avg. monthly limits based on the 99th and 95th percentile (MDL 4.1, AML 2.9, applied as a benchmark), respectively. However, you plan to apply those limits to the 3-day average of the individual data points (3 daily consecutive samples collected quarterly).

My concern is that approach results in a mismatch comparison. If the intention is to have reporting based on a 3-day composite, then the limits development should be based on the 3-day average of samples as well, see the yellow highlighted text in the workbook. The 3-day average data set is lower in magnitude and variability, which results in lower limits based on lognormal distribution and 99/95 percentiles (MDL 3.8, AML 2.7). The number of samples should be corrected in the limits calculation if the permit will required 3 samples per month, this will lower the AML (or benchmark), but does not impact the probability of non-compliance.

As you describe below, DEQ would like to have limits that do not result in non-compliance. This is contrary to both DEQ's and EPA's guidance for using 99/95 percentiles for limits based on the data set. Using these percentiles to set limits results in achievable, but not overly lenient limits. I suggest that your discussion and technical justification about limits development focus on consistency with regulations and guidance. I don't think it is necessary to discuss DEQ's desire to minimize the possibility of non-compliance. It goes without saying and EPA's approach to establishing effluent limits accomplishes achievable limits. Perhaps, in order to have a workable approach for small dischargers that only sample 1/month, a longer averaging period or moving average could be used in lieu of the average monthly limit.

Give me a call if you want to discuss.

KAREN BURGESS, P.E.
State Oversight Lead
NPDES Permits Unit - EPA Region 10

206-553-1644 | Burgess.Karen@epa.gov

From: BOHABOY Spencer <Spencer.BOHABOY@state.or.us>
Sent: Wednesday, January 30, 2019 3:57 PM
To: Burgess, Karen <Burgess.Karen@epa.gov>
Cc: STURDEVANT Debra <Debra.STURDEVANT@state.or.us>
Subject: LCA language

Hi Karen,

Thinking about your comments on the last Clean Water Services Variance Application we have decided to follow the suggestion for a performance based effluent limit approach. Below is the language describing the process we came up with and included in the updated technical review document. Can you please take a look at it and the attached spreadsheet and share your thoughts?

Thanks,

Spencer

3.3 The Highest Attainable Effluent Condition

As discussed above, DEQ has determined that it will express the highest attainable effluent condition as 1) the Level Currently Achievable (LCA), and 2) the adoption and implementation of a Mercury Minimization Program. The LCA is the effluent condition achievable using the currently installed treatment system that is operated at the “highest and best” condition. Establishing a permit limit based on the LCA ensures that the facility will achieve the highest effluent quality feasible with their existing treatment systems throughout the term of the variance.

According to federal regulations and guidance, and as a result of litigation on mercury issues in Michigan, the HAC assigned under a variance must be based on discharger specific data.

DEQ proposes to include a LCA-based permit limit for the Rock Creek AWWTF as a requirement of the variance. The LCA was calculated using discharge data from the Rock Creek AWWTF collected over the past five years^[1] when the applicable process was being utilized. The permit limits will be expressed as a quarterly average of total mercury in nanograms/liter. Additional information on the calculation of the LCA’s is provided here and in Attachment 3.

To calculate the LCA, the DEQ uses the guidance in Appendix E of the EPA Technical Support Document (TSD) procedure for calculating a performance based effluent limit with lognormal distributions. Specifically, the TSD procedure for the calculation of the Daily Maximum Permit Limits Based on the Lognormal Distribution on page E-8 is used to calculate the LCA. All calculations will be performed pursuant to the DEQ’s IMD on rounding and significant digits. The LCA limit will be re-evaluated at least once every 5 years under a variance and can be adjusted as appropriate based on the updated monitoring data collected during the permit cycle.

The procedure selected used the 99th percentile of the log transformed data set to calculate the LCA. This procedure was selected over the Monthly Average Permit Limit Based on the Lognormal Distribution procedure (page E-9) using the 95th percentile of the same data set was chosen due to the potential amount of variation in influent mercury loading and in

^[1] DEQ will use the preceding 5 years (Q1 2013 thru Q1 2018) of effluent data, if available, since that most accurately reflects the current treatment technology, operational conditions and previous source reduction achievements, while also reflecting the variability in the effluent concentrations. If there is not sufficient data from the preceding 5 years, DEQ may use data from a longer timeframe to better understand the effluent quality, as long as the facilities and treatment operations have essentially remained the same.

analytical analyses. The goal of the LCA based regulatory effluent limit is to ensure the facility continues to optimize performance with its current technology, not to create compliance and enforcement issues for short term and infrequent excursions that are outside the control of the facility. It is also DEQ's goal to establish a method for determining LCA that will work for multiple and diverse facilities that may be covered in the future by a multiple discharger variance. This would include small communities that would have difficulty monitoring mercury more than once per quarter. For these reasons, DEQ has concluded that the approach of using the 99th percentile for the regulatory permit limit together with a performance benchmark based on the 95th percentile accomplishes these objectives. The Performance Benchmark, discussed further below, provides a link to the Mercury Minimization Program.

The LCA calculation resulted in an effluent limit of 4.1 ng/l for total mercury. The calculation data and results are presented in the graph below (Figure 6) relative to the quarterly averages of the data sets.

